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### HUNGARY

All prices are VAT included. Valid from February  $14^{th}$  until April  $30^{th},\,2020$ 



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Why re-evaluate your Instrument Management?



## SEE YOUR PATIENTS -NOT YOUR INSTRUMENTS New HD Black Line Mirrors

Glare interferes with visibility. Reducing this disruption to your visibility allows you to see more detail and offer more accurate patient care. HD Black Line Mirrors are engineered to optimize clinical outcomes by delivering superior visibility throughout any dental procedure. The reduced glare properties of the Diamond Like Carbon (DLC) coating and clarity of the HD mirror glass facilitates quicker and more accurate visibility intraorally.

I wear loupes with a LED light and noticed a significant difference in the amount of glare reflecting back into my field of vision during patient care, allowing me to see more detail. I realized, at the end of my clinical day, I had less eye strain when I used the HD Black Line Mirrors.





Tami Wanless, RDH, MED



## SEE YOUR PATIENTS - NOT YOUR INSTRUMENTS

**New HD Black Line Mirrors** 

Diagnostic is the very starting point of every dental procedure and as a famous proverb states "well begun is half done". Having a clear and precise diagnosis is needed in order to correctly plan the necessary treatment.

Sight is the first sense that every clinician uses, therefore having the best possible vision is crucial.

With this in mind, Hu-Friedy leveraged the success of HD Mirrors, Blackline and XTS product lines, to create HD Black Line Mirrors.

Hu-Friedy's newest innovation was engineered to optimize clinical outcomes by delivering superior visibility throughout any dental procedure.

Designed for enhanced performance, Hu-Friedy's HD Black Line Mirrors have a **Diamond Like Carbon (DLC) coating**, which reduces glare up to 80%\*\* compared to a standard metal mirror heads and handles. This helps to reduce strain and fatigue, creating a more ergonomic mirror, as the user does not need to adapt their viewing position due to unwanted shine produced by traditional metal mirror handles or frames.

Additionally, the black matte finish provides enhanced contrast and visual acuity within the oral cavity. This creates a distinct contrast between the instrument, the tooth and/or the surrounding tissue allowing for easy identification intraorally.

The DLC coating in combination with the superior brilliance and color of Hu-Friedy's proprietary HD Mirror glass facilitates guicker and more accurate visibility of the mouth.

#### The benefits of Hu-Friedy's HD Mirror alass:

- 113 %\* reflection factor for exceptional image clarity
- 50 %\* brighter than other front surface mirror glass
- 38.5 %\* brighter than rhodium coated mirror glass
- Front surface reflection provides a sharp, distortion-free image\*

The large diameter handle offers increased control creating an ergonomically friendly option to provide the clinician maximum comfort and reduces hand fatigue.

\* Data on file and available upon request.



Use of HD BLack Mirror to facilitate the digital impression | Quote and clinical image is courtesy of Dr. Carlo Poggio.

## Dr. Carlo



# **REDUCES GLARE UP TO 80%**\*\* AFTER BEFORE

\*\*When comparing the Hu-Friedy DLC coated mirror head and handle to the Hu-Friedy non-coated stainless steel mirror head and handle.

#### Tips & Tricks in Digital:

**66** A very simple "digital dentistry" issue: when dealing with intraoral scans in the posterior areas, it is often necessary to retract the tongue. Unfortunately our usual retractor, the dental mirror, has a metal reflective back surface, which is not ideal for light reflection; scanning may be interrupted or get distorted.

By using Hu-Friedy's new HD Black Line Mirror I definitely solved the light reflection issues.





Hu-Friedy

## **SEE YOUR PATIENTS - NOT YOUR INSTRUMENTS**

New HD Black Line Mirrors

### HU-FRIEDY'S NEW HD BLACK LINE MIRRORS ARE NOT JUST FOR HYGIENE EXAM PROCEDURES. **COMPLETE YOUR KIT NO MATTER THE SETUP!**











MIR5DSHDB #5 Double-sided HD Mirror. Cone Socket, Black Line, Single Pack



Cone Socket Mirror Handle, Satin Steel, Black Line



8.370,57 FI

#5 Single-Sided HD Mirror, Cone

Socket, Black Line, Single Pack

MIR5HDB





xam Perio



EUROPEAN THREAD



**MIR5DSHDBE** #5 Double-sided HD Mirror. European. Black Line, Single Pack



MIR5HDBE #5 Single-Sided HD Mirror, European, Black Line, Single Pack

11.170,66 FI MHE6B European Mirror Handle,

Satin Steel, Black Line

LAUNCH PRICEDouble sided mirror + Handle 17.814,29 FI (retail 21.463 FT)Single sided mirror + Handle 16.140,18 FT (retail 19.531,33 FT)

## **BE SAFE AND IMPROVE** YOUR WORKFLOW!



DESCRIPTION	PA
IMS Infinity Series 1/4 DIN Cassette 5 Instruments, Blue	IM
#6 European Simple Stem Mirror Handle <b>BLACK LINE</b>	МН
#5 Single-Sided European HD Mirror BLACK LINE	MI
#23 Shepherd's Hook Explorer SE, handle #6	EX
#CP-15 UNC Color-Coded Probe Metal SE, handle #6	PC
#2 College Dressing Pliers	DP

MH6B



HU-FRIEDY

RTCODE E14DIN58 IE6B **R5HDBE** (\$236

PUNC156

## **DIAGNO KIT** 85.809,07 FT



### **DISCOVER HOW OUR IMS SYSTEM CAN IMPROVE YOUR SAFETY** AND ORGANIZATION IN THE NEXT ARTICLE

### **BE SAFE AND IMPROVE YOUR WORKFLOW!**



DESCRIPTION	PARTCODE
IMS Infinity Cassette 1/4 DIN, 5 Instruments, blue	IME14DIN58
Scaler #23 EE 2.0, handle #9	SM239E2
Curette Gracey #5/6 EE 2.0 MF oral/labial, yellow, handle #9	SAS5/695E2
Curette Gracey #7/8 EE 2.0 MF oral/buccal, green, handle #9	SAS7/897E2
Curette Gracey #13/14 EE 2.0 AF distal, blue, handle #9	SRP13/1498E2
Curette Gracey #15/16 EE 2.0 AF mesial, orange, handle #9	SRP15/1693E2

## PERIO KIT

137.320,27 FT

# **AN INFECTION PREVENTION SOLUTION BUILT AROUND YOU**

#### Why reevaluate the way you manage your instruments?

It may seem like a small step, but an Instrument Management System can have a big impact on your practice.

Keeping instruments organized and managing them properly improves the flow of your dental clinic.

The sterilization area can run more efficiently, and staff members remain focused on the patient while providing the best level of care.

One of the most heated topics in the dental field, and very often discussed among clinicians, is infection prevention and the best protocols to follow during instrument reprocessing within the dental clinic

A primary infection control goal for health care is to provide sterile instruments during patient treatment in order to ensure safety. Not only are the patients exposed to the risk of blood borne pathogens, but also clinicians and dental assistants themselves. According to the CDC. (Centers for Disease Control and Prevention, USA) and European Recommendations, dental practitioners, hygienists and



HU-FRIEDY



assistants need annual trainings about these serious issues as they never stop benefitting from helpful reminders.

Moreover, because of the increasing problem of bacterial resistance, infection control protocols are constantly under the spotlight and more and more they are becoming the utmost priority in the dental field. While proper instrument sterilization remains the end goal of infection control, considerations can be done concerning the technologies and protocols that minimize the risk of cross-contamination during the various steps of instrument reprocessing.



## **AN INFECTION PREVENTION SOLUTION BUILT AROUND YOU**



#### A better practice with the **Instrument Management** System (IMS)

Technological advancements in infection control equipment have led to an ongoing evolution of tools and the Instrument Management System (IMS) by Hu-Friedy. IMS offers a high standard of organization in the dental office while combining the cleaning, sterilization and storage of dental instruments.

Using Hu-Friedy cassettes organized by procedure offers an alternative approach

#### for the whole dental office, meaning a sensible improvement in the team workflow.

Keeping organized instruments, accessories and disposable in a single integrated system per procedure, allows clinicians not only to be efficient and increase their productivity, but also to prevent many of the frequent sharp exposures encountered during hand scrubbing, drying, sorting and packaging of instruments.

The number of advantages of using IMS solution are tangible. For example, when the instruments are locked into a cassette,

11 = Ocean Blue

their tips are safe and are less susceptible to damage, breakage or misplacing and the risk of an injury during transportation from the patient operatory to the sterilization area is minimal. Using cassettes enhances chairside efficiency and the productivity of the entire dental clinic. Instruments are organized into procedural set-ups with a color-coded silicone rail system that makes visual identification easy. This saves minutes with every patient, allowing additional time for the doctors that are caring for them.

Patients want and deserve optimal infection control, and a professional chairside image through the presentation of sterile packages, they are aware that the instruments are clean, sterile and ready to be used for their procedures according to proven safety protocols and regulations.



#### Streamline reprocessing by eliminating the timeconsuming steps that slow down staff

Depending on the clinic and the practitioners' needs, Hu-Friedv's Instrument Management System (IMS) can be adapted and customized while avoiding forgetting every step of the cleaning procedures and promoting the proper flow

DO YOU NEED HELP TO CHOOSE YOUR INSTRUMENTS AND FINALIZE THE SYSTEM? Ask for a free consultation by one of our experts. https://imsuser.hu-friedy.eu/en/contacts/

### • IMS INFINITY CONTAINER CASSETTES AND CONTAINERS

ORGANIZE YOUR PRACTICE BY COLOR CODING *CHOOSE THE COLOR. Just add the color coding number to the last part of the partcode (replace "_" with the number)	CASSETTES:	CONTAINERS:
0 = Red 1 = Grey 2 = White		312 x 170 x 030 ililli, m version
3 = Orange 4 = Violet	IMECCI2_S* IMS Surgical Container Cassette for 12 Instruments	-0-
5 = Yellow 6 = Lavender 7 = Black	Cassette + Container M + Filter	IMDINCO3M IMS DIN Container, For Max. 3 Cassettes, 312 x 190 x 135 mm
8 = Blue 9 = Green	+ Indicators Label + Seal 212.591,02 FT	Add <b>8.617</b> FT for Container for 3 Ca
11 = Ocean Blue		

#### **BUILD YOUR INSTRUMENT MANAGEMENT SYSTEM WITH US! Choose your preferred solution:**

#### • IMS INFINITY CASSETTES AND WRAPS **ORGANIZE YOUR** CASSETTES: TAPE: WRAPS: PRACTICE BY COLOR CODING IME14DIN5 \* IMS-126 # IMS-1211MH IMS Infinity 1/4 DIN \*CHOOSE THE COLOR. Autoclave Wrap for 1/4 DIN IMS Autoclave Monitor Tape, 55 mm Cassette for 5 Instruments Cassettes (100 sheets) Just add the color codin number to the last part o the partcode (replace "\_" with the number) IMS-1212MH Autoclave Wrap for 1/2 DIN ou can choose between diffrent Cassettes (100 sheets) colors and procedure texts. Check it 0 = Red **IMS-1210MH** downloading IMS Catalogue, page 28. 1 = Grey Autoclave Wrap for 1 DIN and IMFDIN13 \* Container Cassettes (100 sheets) IMS Infinity 1 DIN 2 = White ADD YOUR TUBS: Cassette for 13 3 = Orange Instruments witl IMS-140 accessory area IMS Signature Series Complete Tub 4 = Violet IME12DIN1 \* 5 = Yellow IMS Infinity 1/2 DIN Cassette for 10 Instruments 6 = Lavender = Black 8 = Blue 1/4 DIN Cassette + Wrap + Tape 1/2 DIN Cassette + Wrap + Tape 1 DIN Cassette + Wrap + Tape 97.828.35 F 63.916.81 FT 75.077.57 FT 9 = Green

of dirty to clean. Clinicians who have implemented the IMS solution in their dental practice, benefit every day from the



HU-FRIEDY

advantages of a simplified system that has been customized according to their clinical expectations, to how many patients they visit per day and how many chairsides they have in the clinic.

Clinicians have noticed that investing in IMS is necessary during implementation, considering dental offices may need to upgrade their sterilization area. However, the increased efficiency and productivity of saving time for every single procedure pays off the investment in the long run. ►



3 Container

### **ACCESSORIES**

-

#### IMCO-FIL1M

IMS Container Accessories Filter 95 x 215mm (PTFE) 2pcs./pack., M version

#### IMCO-IND IMS Container Accessories Indication Label - 100pcs./pack





IMCO-CO IMS Container Identification abel, blue (Laser marking available at additional charge)



IMCOM-SEAL IMS Container Accessories Seal 100pcs./pack., blue, M version

### ADD YOUR TUBS: IMS-140 \* IMS Signature 27.858.97 FT Series Complete Tub



## AN INFECTION PREVENTION SOLUTION BUILT AROUND YOU

#### A complete turn-key solution for a long-lasting relationship

During the implementation process, Hu-Friedy representatives offer their expertise to help clinicians build their own customized solution. First, the equipment needed is determined, then the number of cassettes that are necessary for each procedure. The implementation takes place one step at a time with the constant support and follow-up of Hu-Friedy.

It's an ongoing process that is possible only by working together and even once the process is completed, Hu-Friedy continues to organize educational trainings about IMS and Infection Control and develops new up-to-date tools that can be added to the implementation at any time. Practitioners still benefit from the IMS system even after 20 years through increased organization between one procedure and another, a more efficient workflow savings considerable time saving and improved safety and infection control.



#### **Read what Experts says about** INSTRUMENT MANAGEMENT SYSTEM

imsuser.hu-friedy.eu/en/resources/ims-best-practice-and-testimonials/



## ORGANIZE YOUR **CLAMPS**



IMS-1273 IMS Accessory Box, large 20.089.37 FT

IMS-1271

IMS Accessory Box, small

14.873.86 FT

THE NEW FRONTIER OF **RESTORATIVE DENTISTRY** Federico Ferraris Adhesthetics Theca Kit

The Adhesthetics Theca kit is comprised of four unique instruments designed by Dr. Federico Ferraris in collaboration with Hu-Friedy. It is a unique set of instruments created for use during the clinical phases of both direct and indirect restorative dentistry to help clinicians achieve positive results through clinical excellence.



The Main Shaper. the Fine Shaper, the 3D Shaper and the Direct Caliper are all made using XTS

> Incorporating these techniques into everyday procedures allows for predicable results in direct and indirect restorative dentistry. Constantly challenging vourself and continuously making personal improvements is the personal motto of Federico Ferraris: Do better than yesterday. 🌒 🌑

Born on 10th of August 1974 in Alessan Graduated in Dental School at Genoa I ADHESTHETICS founder.

International speaker at dental congr than fourty Countries.

Active Member of the following Acade Academy of Esthetic Dentistry), AIC (I Conservative), IAED (Italian Academy SCAD (Society for Color and Appearan Member of AARD (American Academy IAAD (International Academy for Adhe



- technology, a dark Aluminum Titanium Nitride (AITIN) coating that offers superb contrast in comparison to composite materials and tooth structure.
- The coating is also incredibly slick, resisting the adhesion of sticky composite materials. The smooth handle is not only ergonomic and lightweight, but each instrument has its own distinct set of colour cones, making instrument identification simple. The set of four instruments includes an IMS Cassette, which prevents the instruments from being damaged during transportation and sterilization protocols. ►

ndria, Italy. University as DDS in 1999.	He is President Elect of SCAD for the biennium 2021-2022 and of AIC for the biennium 2022-2023 DSD (Digital Smile Design) Master since 2013.	
resses and courses in more	Member of the Editorial Board of IJED (International Journal of Esthetic Dentistry) since 2010.	
emies: EAED (European Italian Academy of	Co-author of several Italian and International scientific publications.	
of Esthetic Dentistry) and nce in Dentistry).	Dental practice in Alessandria, focusing in Operative Dentistry and Prosthodontics.	
of Restorative Dentistry) and esive Dentistry).	www.federicoferraris.com	



## THE NEW FRONTIER OF RESTORATIVE DENTISTRY

Federico Ferraris Adhesthetics Theca Kit



#### TNFF1/2 Main Shaper

FF1

Manipulation of composite on buccal surfaces during direct anterior restorations. Class IV and V cases\*, direct veneers restorations and general esthetic restorations.

The tip's lance shape and flexibility allow for it to adapt to restorative material (Fig. 6) and is also effective in removing excess material from the vestibular region by using its edge (Fig. 7).



\* According to Black's classification of cavities. Black's classification of cavities. Oxford Reference, Retrieved 6 Nov. 2019, from https://www.oxfordreference.com/view/10.1093/ oi/authoritv.20110803095509657.



Its flexibility allows for restorative materials to be manipulated with a delicate touch. It is sturdier than a standard brush however less rigid than a standard spatula.

#### FF2

Application of medium-great quantity of material directly on the tooth or as a material carrier. Its round shape and rigidity allow for the manipulation of restorative materials in wide cavities. It is also effective when placing material on wide surfaces (Fig. 8).

Dimensions of working part: length 11,5 mm; width 2,5 mm and thickness 0.4mm.





#### TNFF3/4 Fine Shaper / Cord Packer

#### **FF3 & FF4**

Modelling of restorative materials on anterior and posterior teeth as well as the placement of retraction cord. A distinctive characteristic of this spatula (FF3 straight and FF4 angled) is its flexibility. Its thin design allows for precise modelling (Fig. 9, 10, 11, 12).











It is particularly useful for deep cavities. It is also helpful during procedures where high magnification is used because its length allows for easier access to these deep regions while not interfering with the clinician's field of vision (Fig. 13). Retraction cord can be placed precisely with the thin instrument tip (Fig. 14). ►









## THE NEW FRONTIER OF RESTORATIVE DENTISTRY

Federico Ferraris Adhesthetics Theca Kit



### TNFF5/6 3D Shaper

#### FF5

Anatomical modelling of restorations of posterior cusps (Fig. 15, 16, 17) or of anatomical dentinal or superficial elements on anterior teeth (Fig. 18). The unique teardrop shape of this point makes it excellent for sculpting materials in both posterior and anterior cases.









#### FF6

Sculpting thin sulcus as well as finishing of the margins and thin modellings on posterior and anterior direct restorations (Fig. 19, 20, 21, 22). Application of fluid material in deep cavities (Fig. 23), positioning of flowable materials in occlusal sulcus (Fig. 24), coating low viscosity materials (Fig. 25), removal of excesses of high viscosity cementation material (Fig. 26) and control of margins after cementation (Fig. 27). point makes it excellent for sculpting materials in both posterior and anterior cases.















Its distinctive curved shape allows the tip to easily reach areas in both the anterior and posterior arch. Fine details can be created in restorative materials due to the tip's thin design. 🕨





FIG. 27

## THE NEW FRONTIER OF RESTORATIVE DENTISTRY

Federico Ferraris Adhesthetics Theca Kit



### **TNFF7/8 Direct Caliper**

#### FF7 e FF8

Assess thickness of enamel margin in direct restorations on anterior teeth (Fig. 28), assess thicknesses of direct and indirect restorations during various clinical phases (Fig. 29), creating definition of dentinal curving (Fig 30).







This instrument is a restorative probe with a flat head (not rounded, as most periodontal probes) with grooves at 0.5mm increments. The tip is angled at 45° which when aligned against the preparation bevel, allows for the thickness of dentinal material and residual buccal enamel to be determined.

The FF7 can be used to assess an enamel thickness of 0.5mm (the universal thickness in the third medium of the crown), while the FF8 can be used to assess a thickness of 0.9mm (which is preferred in incisal areas, or times when the thickness of the natural enamel is of critical importance). The shape of the dentin in the incisal direction in addition to the thickness to the margin can be determined with this instrument.

#### 128.348,74 FT ADHESTHETICS THECA KIT **TNFFDIN**



### ADD 16.140,18 FT TO HAVE THE NEW HD BLACK MIRROR (MIR5HDBE + MHE6B)





## INNOVATION IN THE PALM OF YOUR HAND New Atlas Forceps

### Innovation at Hu-Friedy never stops

Before the official October 1st launch date of the new Atlas forceps, the European dental community got an early look at this new product line during the EAO Congress in Lisbon at the end of September.

Atlas forceps are another great example of how to meet a clinicians' needs during extraction procedures. They also represent a significant addition to a now **more complete and attractive line of extraction forceps**.

Our expanded portfolio provides the clinicians with a **wider range of possibilities** to better fit their needs when approaching extractions.

Within this portfolio, the Atlas forceps product line represents the highest value for your dollar, with its internal spring which maintains the forcep in an open position helping reduce manipulation during surgeries, enhancing comfort and control.

Presidential

XA	
/	

European polished



European matte

Atraumair



Atlas





I. Valid from February 14th until April 30th, 2020



### **INNOVATION IN THE PALM OF YOUR HAND**

**New Atlas Forceps** 



#### **DID YOU KNOW?**

All forceps should be kept lubricated. Regular use of proper lubricants, like Hu-Friedy Instrument Lubricant Spray (**ILS**), will prevent rust, corrosion and stiff joints to ensure smooth operation. All hinged instruments should be sterilised in the open position.

ILS IMS Lubricant Spray for instruments 8oz/237ml Pump

## Be amazed by the enhanced comfort provided by Atlas forceps

It takes years of hard work, education and training to determine the proper balance of the firm yet delicate technique needed during an extraction procedure to ensure patient comfort.

Engineered to provide simplicity and precision, Atlas Forceps have the power to effectively perform even the most difficult extractions.

The innovative internal spring helps reduce hand manipulation, increasing comfort and control.

The Forceps offer a full arch solution through the 14 designs which are available in both standard and apical styles.

There are several advantages about using an Atlas extraction forcep, but the feeling coming from handling it is definitely unique!

> F. Merlettini EMEA Surgical Product Manager



#### Main features and benefits:

- Internal springs maintain the forceps in the open position, helping reduce manipulation during surgery, enhancing comfort and control
- Apical designs provide a firm, secure grasp of the crown and root
- Thin, sharp tapered beaks for ease in penetrating the PDL and apical progression\*
- Innovative spring hinge ensures forceps are in the **open position during reprocessing**
- Laser marked hinge for easier identification when bagged during cleaning and sterilization
- Meticulously handcrafted from the finest grade surgical stainless steel

\* Apical designs with tapered beaks during subgingival apical progression in an extraction

Hu-Friedy

ncluded. Valid from February 14th until April 30th, 2020

### **INNOVATION IN THE PALM OF YOUR HAND**

**New Atlas Forceps** 

and see [







## LAUNCH PRICE 81.988,66 FT

(retail 96.583,50 FT)

Hu-Friedy Highlights - All prices are VAT included. Valid from February 14th until April 30th, 2020



23

## **SWISS PERIO KIT** by Dr. Rino Burkhardt

#### Main features and benefits:

 INDIVIDUALLY DESIGNED **INSTRUMENTS** 

Refined working ends helps reduce the likelihood of tissue trauma

Ultimate manufacturing tolerances for precise handling

Easy to clean

#### BLACK INSTRUMENTS / **BLACK LINE EXTENSION**

More contrast between the instrument and the tissue

Avoids light reflection

Optimal edge retention and enhanced lubricity

#### BALANCED WEIGHT

More control and precision during delicate microsurgery procedures



SwissPerio Education was founded by a group of periodontists and stands for a new training platform offering tailored courses on various topics in the domain of periodontology and related fields.

Events organized by SwissPerio are different from those of other providers as the transfer of disciplinary knowledge on an expert and evidencebased level is just one of the facets of the courses. The restricted number of participants provides room for personal interaction and open discussions, stimulating the trainees for critical thinking and teaching them in clinical decision-making.

Most of the SwissPerio events are related to clinical practice and, therefore, the third focus of SwissPerio Education is directed at the improvement of psychomotor manual skills

#### Dr. Rino Burkhardt



Rino Burkhardt, one of the Board Members of SwissPerio Education, is responsible for the training programs. He is an EFP (European Federation of Periodontology) certified specialist in periodontology and received his Masters degree from the Medical Faculty of the University of Berne. Switzerland, Since 1996 he runs a private clinic in Zurich, limited to periodontology and implantology. Additionally, he holds an Honorary Professorship at the University of Hong Kong and a lectureship at the University of Zurich. He is an active member of the Swiss Society of Periodontology (SSP), the European Academy of Aesthetic Dentistry (EAED), the European Association for Osseointegration (EAO), and Board Member of the Swiss Society of Oral Implantology (SGI).

He published numerous book chapters and articles and won a research prize from the EFP.

swissperio.com

#### swiss operio





Wiss aperio

SWISS PERIO KIT y Dr. Rino Burkhardt

BUY SPTPDSSPV+SPSPV+SPNHDPVN 402.560,03 FT (retail 729.141,04 FT)



1977 FRA 19



#### **CONTAINS:**

Code	Description
IMEDIN187S	IMS Infinity DIN Surgical cassette for 18 instruments, black
SPNHDPVN	Swiss Perio Microsurgical Needle Holder Stainless Steel
SPTPDSSPV	Swiss Perio Microsurgical Plier Straight Stainless Steel
SPTPDAPV	Swiss Perio Microsurgical Plier Straight Stainless Steel
SPSPV	Swiss Perio Microsurgical Scissor Stainless Steel
SPSPV45	Swiss Perio Microsurgical Scissors Stainless Steel, 45 degree
SPP24GSPX	Swiss Perio Periosteal Elevators Mod. P24G, Black Line
SPP24GSICX	Swiss Perio Periosteal Elevators Mod. P24GSIC, Black Line
SPPH2X	Swiss Perio Tissue Dissector Mod. PH2, Black Line
SPPSCHLEEX	Swiss Perio Papilla Elevator Mod. PPSCHLEE, Black Line
CL84X	#84 Lucas Double Ended Surgical Curette, Black Line
SPP24GSP2X	Swiss Perio Periosteal Elevators Mod. P24GSP, Black Line
SYG7/8CHE2	#YG7/8 Younger-Good, EverEdge 2.0, Smooth Handle Stainless Steel
PH6CH	Colorvue Probe Handle, Smooth Handle Stainless Steel
SHDPV	Mini Scalpel Blade / Mirror Handle Stainless Steel
10-130-05E	#5 European Style Round Scalple Handle
MHE6CH	#6 Simple Steam Mirror Handle, Smooth Handle
DP17	#17 Dressing Pliers
PQ2NCH	#Q2N Color-Coded Nabers Probe, Smooth Handle
PCV12PT	#12 Colorvue Probe tips, 12 Replacements Tips
MIR5DSHDE	European Simple Steamn.5 Double-Sided HD Mirror, Single

## SWISS PERIO KIT

## 1.403.036,31 FT (retail 1.454.719,21 FT)



## LET'S BE CLEAR: ENHANCING ALIGNER TREATMENTS Clear Collection instruments

**678-800** The Tear Drop 678-801 The Vertical 678-802 The Horizontal 55.760,87 FT each

678-803 The Hole Punch



#### IMNORTHS8

IMS Infinity Cassette Ortho, small, thin, blue

#### 72.544,94 FI



In part 1 of a series, **Dr. S. Jay Bowman** explores instruments that help increase the utility of aligners and expand the scope of appropriate applications

As clear aligner treatments have evolved and been progressively refined in the past 15 years, more advanced applications and increasingly complex malocclusions have been addressed.<sup>1-4</sup>

In addition, there has been more interest in tackling some of the specific limitations of moving teeth with plastic.<sup>5-7</sup>

Obviously, the progress of orthodontic treatment with traditional wires and braces has been advanced throughout the past century, but the techniques associated with a sequence of aligners are relatively recent phenomena.

Orthodontists with the most experience and enthusiasm in using aligners have worked diligently to improve the concept through better understanding of the limitations involved in more advanced treatment planning, especially when using adjuncts to enhance the associated biomechanics.<sup>4,8-13</sup>

The Clear Collection of instruments from Hu-Friedy (Chicago, Illinois, at www. hu-friedy.eu) was developed with that aim in mind; namely, to help to increase the utility of aligners and expand the scope of appropriate applications.<sup>13</sup>►



## **LET'S BE CLEAR:** ENHANCING ALIGNER TREATMENTS clear collection Instruments

66 Innovation is taking two things that already exist and putting them together in a new way. Tom Freston

#### Adding intra- and intermaxillary forces

The Clear Collection instruments have streamlined and standardized some procedures that orthodontists had already been providing, while opening up more options for other methods to accentuate or refine treatment.

In the past, attempting to add intermaxillary elastics for correction of Class IIs, IIIs, or midlines was problematic.

Some were cutting notches in plastic trays using scissors or nail clippers <sup>10</sup> or attempting to adhere buttons to the trays – all unwieldy endeavors.

#### The Tear Drop

There are occasions when orthodontic elastics are needed to assist with specific tooth movements or growth modification when using aligners. For instance, it may be beneficial to add elastic hooks or bonded buttons in different locations along the arch form on either the buccal or lingual. It would be beneficial to incorporate an elastic hook that cannot be dislodged from the aligner and that only requires a simple one-step squeeze of a pair of pliers to create. Most importantly, a hook that actually holds the elastic in place on the aligner.

The Tear Drop pliers (Figure 1) is an instrument created for the purpose of adding a notch or hook at the gingival margin of clear aligners. A standardized notch is easily cut in a single step, creating a teardrop-shaped "reservoir" to hold the elastic on the tray



| Figures 2A-2B: Teardrop-shaped hooks retain elastics when aligners are seated, making the addition of "rubber bands" easier for patients to manipulate. Notches are made at an angle to resist forces applied by the elastics

(Figure 2), thereby making it easier for the patients to seat their aligner and connect their elastics. In this manner, the patient is not fumbling with elastics, attempting to hook them in two locations since the elastic accompanies the aligner as it is seated over the teeth.

Teardrop notches should be cut at an angle to resist the line of force of elastics that are being employed (e.g., the notch is angled anteriorly at the mesial of the upper cuspid for Class II elastics; Figure 2). These hooks can be added anywhere along the clear aligner arch at the gingival margin on either the facial or lingual, whenever elastic forces need to be applied.



Figures 1A-ID: The Tear Drop pliers was created to produce a notch in clear aligner plastic to facilitate the application of orthodontic elastics



#### addition of bonded buttons, bonded orthodontic tubes or brackets with associated hooks, or are simply used to relieve impingement of plastic on soft tissue. The Hole Punch can be used to produce cuts on either the facial or lingual of any tooth, anywhere along the aligners, whenever needed. Buttons bonded to teeth, rather than to

The Hole Punch

The Hole Punch (Figure 3) is used to cut a half-moon shaped hole

at the gingival margin of aligners. These half-circle cuts permit the





| Figures 3A-3B: The Hole Punch pliers was created to produce a half-moon cutout to permit the addition of bonded buttons or brackets

During the progress of some patients' treatments (after a series of aligners has already been fabricated and delivered) an orthodontist may wish to add elastics. Bonded buttons can be added to hook up Class II or III intermaxillary elastics, bite-seating elastics, Class I intramaxillary elastics to miniscrews (Figure 4), or elastomeric chain connected to buttons to correct dental rotations. The combination of buttons on molars (plastic relieved using the Hole Punch) along with elastic hooks cut into the plastic at the cuspids (using the Tear Drop) is a common method of employing orthodontic elastics.

In other instances, aligners will occasionally impinge upon gingival tissues and cause gingival pain or inflammation. The Hole Punch can be used to clear the impingement of

plastic in each of a series of aligners. A common location for that type of irritation is at the incisive papilla, behind the maxillary central incisors (Figure 5). Nipping along the gingival margin of a tray with the Hole Punch is also an option to relieve marginal gingival impingement on either the buccal or lingual. ►









Figures 4A-4B: A variety of methods to connect orthodontic elastics can be added to clear aligners using the Hole Punch and the Tear Drop instruments. 4A. Class I intramaxillary elastics connected from teardrop hook to a miniscrew (i.e., to support molar distalization) plus Class II intermaxillary elastics from teardrop notch to bonded button. 4B. Intermaxillary elastics hooked to bonded buttons to assist with seating of teeth into aligners and improve occlusion



Figures 5A-5D: The Hole Punch pliers can be used to relieve plastic impingement of gingival tissues anywhere along the aligners (e.g., incisive papilla irritation)



## **LET'S BE CLEAR:** ENHANCING ALIGNER TREATMENTS clear collection Instruments

#### **Bootstrap mechanics**

If certain teeth are not "tracking" or are lagging13 behind (i.e., not fitting into the tray; Figure 6) Aligner Chewies™ are employed (Chewies™ Aligner Tray Seaters.



Figure 6: Aligner "lag" or lost tracking is most often characterized as an "air gap" between the incisal or occlusal of teeth and the plastic, indicating teeth are not following the prescribed tooth movement<sup>13</sup>

Dentsply Raintree Essix, York, Pennsylvania). Patients are asked to hold the Chewie between the teeth in question and squeeze 10-15 seconds, release, and repeat for 5 minutes, 2-3 times per day<sup>8,13</sup>. In addition, Chewies are routinely used for the first few days when patients switch to a new pair of aligners to help them seat more completely.

Another option is to add elastics to forcibly erupt the

teeth into the aligner tray.<sup>13,14</sup> There are several methods to generate so-called "bootstrap mechanics" (Figure 7).<sup>13</sup>

- An orthodontic elastic is stretched over the plastic aligner to connect to a combination of bonded buttons on both lingual and buccal of the tooth.
- 2. A bonded button is placed on the lingual of the tooth (plastic cleared with the Hole Punch). The Tear Drop notches are cut into the tray at the gingival embrasure spaces in the buccal plastic on both the mesial and distal of the problematic tooth, and an elastic hooked from the buccal notches and stretched over the aligner tray to the button to produce an extrusive force.<sup>13</sup>

The Tear Drop and/or Hole Punch cuts are made in each tray in the series of aligners prior to their being delivered to the patient. This concept is also useful when the extrusion of a tooth is needed for restorative purposes.





Figures 7A-7C: Bootstrap mechanics<sup>13</sup> to forcibly erupt a "lagging" tooth using orthodontic elastics (7A-7B). The Hole Punch is employed to clear aligner plastic to permit the addition of bonded buttons. The Tear Drop is used to cut notches in mesial and distal embrasures (8C-8F).

Other biomechanics that benefit from the application of elastic forces to aligner trays may include the correction of severe

rotations, posterior or anterior intrusion mechanics for open bites,<sup>11,12</sup>









Figures 7D-7H: The Tear Drop is used to cut notches in mesial and distal embrasures (7C-7F). Orthodontic elastics are stretched from the button to the teardrop notches or to another button on the opposite side of the tooth (7G-7H)

| Clinical images are courtesy of Dr. Jay Bowman



It is important to remember that indiscriminate alteration of the integrity of clear aligners may reduce their structural strength or may impair the intended biomechanics programmed into an aligner.

The instruments in the Clear Collection help the orthodontist to better customize clear aligner treatments, enhance their desired biomechanics, and streamline the addition of adjunctive forces during the course of a series of aligners. For information on the use and applications of the Clear Collection, instructional videos are available on YouTube at

https://www.youtube.com/watch?v=hrs2VfnImLY. ■



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